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D119-796-241TRN
Job Sheet 198195



Part No: D119-796-241TRN

Job Qty: 1 pcs

Part Name: Crosstube Turning Detail



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 7/23/19

Job Tracking No:

Due Date: 9/2/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG RD119-796 REV.K IPP REV A RQ 14/05/27 VERIFIED BY DD IPP REV:B 16.05.04 AS PER DWG REV.I DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Lead Time	Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier			
100	Mori Seiki TL-40 - 1	1 pcs		9/2/19	1.00	1.72	Mori Seiki TL-40 - 1			DAS 662019-08-12 9-89
110	QC 2	1 pcs		9/2/19	0.00	0.00	QC 2 - 1			
							QC 2 - 12			
							QC 2 - 14			
							QC 2 - 17			
							QC 2 - 19			
							QC 2 - 2			
							QC 2 - 20			
							QC 2 - 22			
							QC 2 - 23			
							QC 2 - 25			
							QC 2 - 32			
							QC 2 - 33			
							QC 2 - 35			
							QC 2 - 39			
							QC 2 - 4			
							QC 2 - 40			
							QC 2 - 44			
							QC 2 - 45			
							QC 2 - 48			
							QC 2 - 49			
							QC 2 - 50			
							QC 2 - 51			
							QC 2 - 52			
							QC 2 - 57			
							QC 2 - 62			
							QC 2 - 63			
QC 2 - 8										
QC 2 - 66										
QC 2 - 64										

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					QC 2 - 65	
					QC 2 - 5	
					QC 2 - 71	
					QC 2 - 73	
					QC 2 - 69	
120	Mori Seiki TL-40 - 1 - B4B	1 pcs	9/2/19	1.00 1.72	Mori Seiki TL-40 - 1 - B4B	DAS 662019-08-14 9-89
130	QC 2	1 pcs	9/2/19	0.00 0.00	QC 2 - 1	
					QC 2 - 12	
					QC 2 - 14	
					QC 2 - 17	
					QC 2 - 19	
					QC 2 - 2	
					QC 2 - 20	
					QC 2 - 22	
					QC 2 - 23	
					QC 2 - 25	
					QC 2 - 32	
					QC 2 - 33	
					QC 2 - 35	
					QC 2 - 39	
					QC 2 - 4	
					QC 2 - 40	
					QC 2 - 44	
					QC 2 - 45	
					QC 2 - 48	
					QC 2 - 49	
					QC 2 - 50	
					QC 2 - 51	
					QC 2 - 52	
					QC 2 - 57	
					QC 2 - 62	
					QC 2 - 63	
					QC 2 - 8	
					QC 2 - 66	DAS 662019-08-14 9-89
					QC 2 - 64	
					QC 2 - 65	
					QC 2 - 5	
					QC 2 - 71	
					QC 2 - 73	
					QC 2 - 69	
140	QC 8	1 pcs	9/2/19	0.00 0.00	QC 8 - 12	
					QC 8 - 14	
					QC 8 - 17	
					QC 8 - 20	
					QC 8 - 25	
					QC 8 - 3	
					QC 8 - 32	
					QC 8 - 33	
					QC 8 - 35	
					QC 8 - 39	
					QC 8 - 4	
					QC 8 - 44	
					QC 8 - 45	
					QC 8 - 49	
					QC 8 - 58	
					QC 8 - 8	
					QC 8 - 9	
					QC 8 - 68	

					QC 8 - 67	
					QC 8 - 1 (A)	DAS
					QC 8 - 47	47
					QC 8 - 40	9-89
					QC 8 - 52	
					QC 8 - 23	
					QC 8 - 57	
145	Crosstubes - 2 - B4B	1 pcs	9/2/19	0.00 0.45	Crosstubes - 1 - B4B	
					Crosstubes - 2 - B4B	EB 9/1/2019
					Crosstubes - 3 - B4B	
					Crosstubes - 4 - B4B	
150	Handfinish - 1-1 Chemical-B4B	1 pcs	9/2/19	0.00 0.40	Handfinish - 1 - 1 - B4B	
					Handfinish - 1 - 2 - B4B	
					Handfinish - 1 - 3 - B4B	SEP 04 2019
					Handfinish - 1 - 4 - B4B	
					Handfinish - 1 - 5 - B4B	
					Handfinish - 1 - 6 - B4B	
					Handfinish - 1 - 7 - B4B	
					Handfinish - 1 - 8 - B4B	
					Handfinish - 1 - 9 - B4B	
					Handfinish - 1 - 10 - B4B	
					Handfinish - 1 - 11 - B4B	
					Handfinish - 1 - 12 - B4B	
					Handfinish - 1 - 13 - B4B	
					Handfinish - 1 - 14 - B4B	
					Handfinish - 1 - 15 - B4B	
					Handfinish - 1 - 16 - B4B	
					Handfinish - 1 - 17 - B4B	
					Handfinish - 1 - 18 - B4B	
					Handfinish - 1 - 19 - B4B	
					Handfinish - 1 - 20 - B4B	
					Handfinish - 1 - 21 - B4B	
					Handfinish - 1 - 22 - B4B	
160	QC 7	1 pcs	9/2/19	0.00 0.00	QC 7 - 10	
					QC 7 - 13	
					QC 7 - 14	
					QC 7 - 15	
					QC 7 - 17	
					QC 7 - 18	
					QC 7 - 19	
					QC 7 - 2	
					QC 7 - 28	
					QC 7 - 3	
					QC 7 - 30	
					QC 7 - 34	
					QC 7 - 36	
					QC 7 - 37	
					QC 7 - 41	
					QC 7 - 47	19-10-11
					QC 7 - 48	
					QC 7 - 51	
					QC 7 - 58	
					QC 7 - 59	
					QC 7 - 60	
					QC 7 - 9	
					QC 7 - 68	
					QC 7 - 50	
					QC 7 - 67	
					QC 7 - 40	
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					QC 7 - 24	
					QC 7 - 43	
					QC 7 - 61	
					QC 7 - 81	
170 Packaging 3-1 - Stock - B4B	1	9/2/19	0.00 0.00	Packaging 3 - 1 - B4B		
	pcs			Packaging 3 - 2 - B4B		
				Packaging 3 - 3 - B4B		
				Packaging 3 - 4 - B4B		
				Packaging 3 - 5 - B4B		
				Packaging 3 - 6 - B4B		
				Packaging 3 - 7 - B4B		
				Packaging 3 - 8 - B4B		
				Packaging 3 - 9 - B4B		
				Packaging 3 - 10 - B4B		
				Packaging 3 - 11 - B4B		
				Packaging 3 - 12 - B4B		
				Packaging 3 - 13 - B4B		
				Packaging 3 - 14 - B4B		
				Packaging 3 - 15 - B4B		
				Packaging 3 - 16 - B4B		
				Packaging 3 - 17 - B4B		
				Packaging 3 - 18 - B4B		
				Packaging 3 - 19 - B4B		
				Packaging 3 - 20 - B4B		
				Packaging 3 - 21 - B4B		
				Packaging 3 - 22 - B4B		
				Packaging 3 - 23 - B4B		
				Packaging 3 - 24 - B4B		FW 19-10-11
				Packaging 3 - 25 - B4B		
				Packaging 3 - 26 - B4B		
				Packaging 3 - 27 - B4B		
				Packaging 3 - 28 - B4B		
				Packaging 3 - 29 - B4B		
				Packaging 3 - 30 - B4B		
				Packaging 3 - 31 - B4B		
				Packaging 3 - 32 - B4B		
				Packaging 3 - 33 - B4B		
				Packaging 3 - 34 - B4B		
				Packaging 3 - 35 - B4B		
				Packaging 3 - 36 - B4B		
180 QC 21 - FG	1	9/2/19	0.00 0.00	QC 21 - FG - 21	BAG 21 9-23	OCT 11 2019
	pcs			QC 21 - FG - 70		
				QC 21 - FG - 53		
Part Op 100 - 1-Fill tube with sand & install plugs on both ends as per Folio FB298 2-Turn first side as per Folio FB298 Descriptions: 110 - (QC2- Inspect parts off machine FAI/FAIB) 120 - 1-Turn second side as per Folio FB298 130 - (QC2- Inspect parts off machine FAI/FAIB) 140 - (QC8- Inspect parts - second check) 145 - GRIND ONLY TRANSITION LINES SMOOTH LONGITUDE WAY. 150 - 1- Handfinish X-TUBE INSIDE AND OUT. ALODINE AND ACID ETCH X-TUBE AS PER DWG . USE RED SCOTCH BRITE PAD. 160 - (QC7-Inspect Chemical Conversion Coat) 170 - (Identify as per dwg & Stock Location:) LOCATION : LG014 180 - (QC21- Final Inspection - Work Order Release)						
Job BOM						
Part / Item	Component Name	Quantity	Operation	Container		
D6023-106	Crosstube Material	1 pcs (1 ea)	100-Mori Seiki TL-40 - 1	S013837		

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
100-Mori Seiki TL-40 - 1	D6023-106	1	14	0
Part Specifications				
Specifications could not be found.				

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www.dartaerospace.com

Container No: S204680



Part: D119-796-241TRN

Job No: 198195

Serial No/Batch: S204680

Revision: K

Inspector:

Exp Date:

Instructions:

Date: 08/12/19

(4)

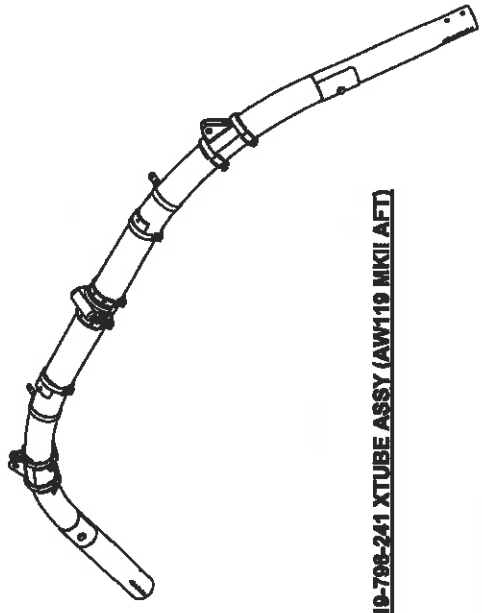
DART AEROSPACE LTD		Work Order: 198195
Description: Crosstube Assembly (AW119 MKII) ^{AMS}		Part Number: D119-796-241TRN
Inspection Dwg: D119-796-241 Rev: JK ³⁵ ₉₋₈₉		Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

Inspection Sheet Drawing Dimension		Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	5.88	+/-0.030	5.878	✓		CNC-08	
	2.516	+0.005/-0.000	2.521	✓		CNC-04	
	2.626	+0.005/-0.000	2.630	✓		↓	
	2.627	+0.005/-0.000	2.632	✓			
	2.798	+0.005/-0.000	2.803	✓			
	2.799	+0.005/-0.000	2.804	✓			
	2.989	+0.005/-0.000	2.994	✓		CNC-05	
	3.191	+0.005/-0.000	3.196	✓			
	3.200	+0.005/-0.000	3.205	✓			
SIDE B	5.88	+/-0.030	5.884	✓		CNC-08	
	2.516	+0.005/-0.000	2.521	✓		CNC-04	
	2.626	+0.005/-0.000	2.631	✓		↓	
	2.627	+0.005/-0.000	2.632	✓			
	2.798	+0.005/-0.000	2.803	✓			
	2.799	+0.005/-0.000	2.804	✓			
	2.989	+0.005/-0.000	2.994	✓		CNC-05	
	3.191	+0.005/-0.000	3.196	✓			
	3.200	+0.005/-0.000	3.205	✓			
	105.71	+/-0.020	105.71	✓		Tape	

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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 198195 ucs
19-07-24

D119-798-241 XTUBE ASSY (AW119 MKI(AFT))



NOTES:
1) MATERIAL: N/A
2) FINISH: MASK D5134-041/042 DAMPER SUPPORT ASSEMBLIES, CLIFFS, D5138-1/2 CONTACT PADS, THE COMPLETE CIRCUMFERENCE OF THE TUBE UNDER THE D5122-1 CENTER SUPPORT AND THE TAB ON THE D5161-1 GROUNDING CLAMP PRIOR TO APPLICATION OF CLEAR COAT PRIMER.
IF NECESSARY TOUCH UP PRIMER ON OUTSIDE OF CROSSTUBE PER DART QSI 005 4.2
APPLY MATTE CLEAR COAT TO THE UNDERSIDE OF CROSSTUBE AS SHOWN (B4-2, HATCHED AREA).
MASK THE UNDERSIDE OF CROSSTUBE AS SHOWN (B4-2, HATCHED AREA).
PAINT OUTSIDE PER DART QSI 005 4.2
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: N/A
6) IDENTIFICATION: IDENTIFY USING PART NUMBER "D119-798-241" AND BATCH NUMBER ON INSIDE OF CUFF PER QSI 044 6.4
7) WEIGHT: 26.28 lbs
8) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM DEFECTS SUCH AS SCRATCHES, NICKS OR DENTS. DEFECTS UP TO 0.005 MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
9) INSTALL D5122-1 CENTER SUPPORT HAND TIGHT ONLY. DO NOT TORQUE. INSTALL RED TAG TO INDICATE "D5122-1 CENTER SUPPORT MUST BE BONDED PER IN-D119-798 PRIOR TO FLIGHT".
10) PRIOR TO FINISHING, ABRASE MATING SURFACES OF D5138-1/2 AND SURFACE OF CROSSTUBE WITH SCOTCH BRITE 7447 RED AND REMOVE RESIDUE WITH DUPONT 4105S WASH N' WIPE DEGREASER. APPLY A 0.100" MIN THK LAYER OF PROSEAL 880 ON THE INSIDE CONCAVE SURFACE OF THE D5138-1/2 CONTACT PADS AND INSTALL CLAMPS AND D5123-8 CLAMP CUSHIONS WHILE WET. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 880 SEALANT HAS CURED FOR 72 HOURS.
11) TORQUE MS21920 CLAMPS 80 - 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY. THE NUT HAS NOT BOTTOMED-OUT AFTER TORQUING AND THE NUT IS FACING AFT.
12) PRIOR TO FINISHING, POSITION AND INSTALL D5134-041/042 DAMPER SUPPORTS USING JIG DT10085. ABRASE MATING SURFACES OF THE D5134-041/042 DAMPER SUPPORTS AND CROSSTUBE WITH SCOTCH BRITE 7447 RED AND REMOVE RESIDUE WITH DUPONT 4105S WASH N' WIPE DEGREASER. APPLY A 0.100" MIN THK LAYER OF PROSEAL 880 ON THE INSIDE CONCAVE SURFACE OF THE D5134-041/042. INSTALL MS21920-25 CLAMPS AND D5123-1 CLAMP CUSHIONS WHILE WET. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 880 SEALANT HAS CURED FOR 72 HOURS. ENSURE THAT THE MS21920 CLAMPS ARE POSITIONED AS SHOWN IN DETAIL C.
13) PRIOR TO FINISHING, ABRASE MATING SURFACES OF CROSSTUBE AND D5162-043 WITH SCOTCH BRITE 7447 RED AND REMOVE RESIDUE WITH DUPONT 4105S WASH N' WIPE DEGREASER. INSTALL D5162-043 WITH LAYER OF PROSEAL 880 ON INSIDE CONCAVE SURFACE, 0.100" MIN THK LOCATE D5162-043 USING TOOL DT10112.
14) INSTALL THE D5161-1 GROUNDING CLAMP AND ASSOCIATED HARDWARE PER DETAIL "C" PRIOR TO FINISHING. TORQUE THE MS21042-3 NUT 12-15 IN-LB. COMPLETELY SEAL THE CLAMP USING PROSEAL 880.
15) CARRY OUT A RESISTANCE CHECK BETWEEN THE D5161-1 GROUNDING CLAMP AND ANY UNPAINTED SECTION OF THE CROSSTUBE IN ACCORDANCE WITH AC43-13-18 CHAPTER 11. MAXIMUM RESISTANCE IS 3 MILLIOHMS.

REV.	DESCRIPTION	BY	DATE
A	NEW ISSUE	AP	14.08.07
B	ORIENTATION OF D5122-1 CENTER SUPPORT WAS CHANGED FROM 180 TO 0 DEGREES. CONTACT PADS WERE MOVED TO INSIDE OF CROSSTUBE. D5134-041/042 DAMPER SUPPORTS WERE ADDED. ADDED REFERENCE TO SKIDTUBES FOR LOCATING CUFF HOLES. RE-ORGANIZED NOTES. REMOVED REDUNDANT INFORMATION.	AP	14.08.03
C	ORIENTATION OF D5122-1 CENTER SUPPORT WAS CHANGED FROM 0 TO 180 DEGREES. CONTACT PADS WERE MOVED TO INSIDE OF CROSSTUBE. D5134-041/042 DAMPER SUPPORTS WERE ADDED. ADDED REFERENCE TO SKIDTUBES FOR LOCATING CUFF HOLES. RE-ORGANIZED NOTES. REMOVED REDUNDANT INFORMATION.	AP	14.08.23
D	CR2312-4-07 RIVETS WAS CR2312-4-08 RIVETS, RADIUS BLOCK WAS NUT PLATE ASSEMBLY (BOM). REMOVED 7.5 INCHES FROM CUFF. REMOVED CUFF DIA TO 2.500 (C5-3). ADD INSPECTION WINDOW.	DB	14.11.26
E	D5162-043 WAS D5160-3, SCOTCH BRITE 7447 RED WAS 160 GRIT SAND-PAPE	DB	15.01.19
F	REMOVED PRIMERPAINT ON CUFFS, 2.516 WAS 2.600 (C4-6)	AP	15.02.09
G	FINISHING ORDER ADJUSTED. UPDATE BEND TOLERANCE AND THIN DETAIL TOLERANCE TO MATCH D119-798-141 DWG	AP	15.04.24
H	NOTE 9 RE-WITTEN. BONDING INSTRUCTIONS MOVED TO IN. BEE PREVIOUS REV FOR DETAILS.	AP	15.07.02
I	D5023-100 MATERIAL REPLACES D5008-100. D5136-1/2 & D5134-041/042 NOW INSTALLED ON PRIMER.	AP	15.10.15
J	ADD NOTE 14 & 15 ON SHT 1. ADD PAINTERPRIMER MASKING LOCATIONS. REVISE NOTES ON SHT 1 & 4. REVISE BOM ON SHT 2 TO ADD GROUNDING CLAMP AND ASSOCIATED HARDWARE. REF PAR 17-680	ML	17.02.10
K	CHANGE LOCATION AND ORIENTATION OF D5016-1 GROUNDING CLAMP. REF CAR 18-222	MW	18.08.19

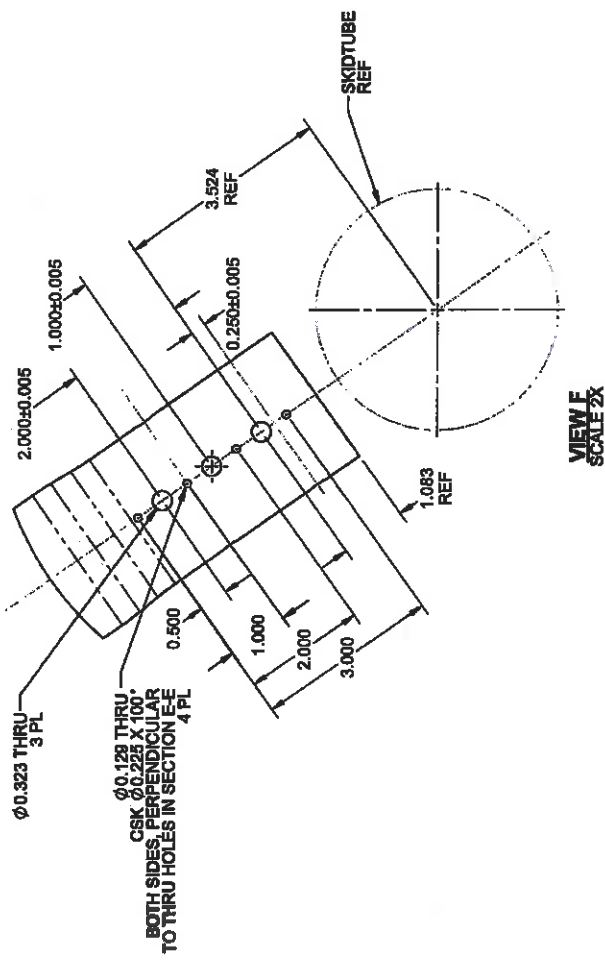
UNDER REVIEW
URF 19-798 18.07.04 (SAD)

RELEASED
2018 MAY 07
ZCN M-795

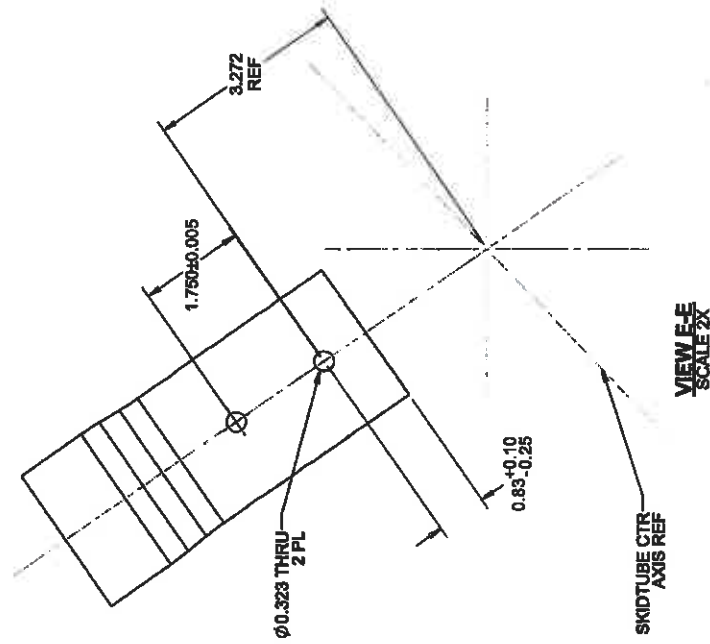
APPROVED

DESIGN	AP	DATE	18.09.19
CHECKED	MW		
MFG. APPR.	JFS		
APPROVED	NO		
DE APPR.	CP		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. D119-798-241			
TITLE XTUBE ASSY (AW119 MKI(AFT))			
SHEET 1 OF 7			
SCALE NTS			
DATE 18.09.19			

1 2 3 4 5 6 7 8



VIEW F
SCALE 2X



VIEW E
SCALE 2X

UNDER REVIEW
URF 19-799 19.07.04 (SAD)

RELEASED
2019 MAY 07 #0

DESIGN	AP	MM	ZF	JFS	NO	CP	DATE	18.09.19
DRAWN								
CHECKED								
MFG. APPR.								
APPROVED								
DE APPR.								
DART AEROSPACE LTD								
HAWKESBURY, ONTARIO, CANADA								
DRAWING NO. D119-798-241								
REV. K								
SHEET 5 OF 7								
TITLE XTUBE ASSY (AW119 MKII AFT)								
SCALE NTS								
CRAFTED BY 2014 BY DART AEROSPACE LTD								
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APPROVED

2 3 4 5 6 7 8

Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only

NCR No. _____

Job: _____ Part No. _____		DISPOSITION Rework ☐ ☐ ☐ Scrap ☐ ☐ ☐ Use-as-is ☐ ☐ ☐		DEPARTMENT/PROCESS Cross tube ☐ ☐ ☐ Eng. (Non-AW) ☐ ☐ ☐ Small Fab ☐ ☐ ☐ Prod. Eng. Coord. ☐ ☐ ☐ Finishing ☐ ☐ ☐ Rec/Store/Packaging ☐ ☐ ☐ Skid-tube ☐ ☐ ☐ Engineering ☐ ☐ ☐ Machining ☐ ☐ ☐ Water Jet ☐ ☐ ☐ Large Fab ☐ ☐ ☐ Supplier ☐ ☐ ☐ Quality ☐ ☐ ☐		MRB (QSI042)	
Date: _____		Sequence #: _____		QTY Affected: _____			
Description Work Order Deviation		Disposition		Completed By			
Root Cause Operator ☐ ☐ ☐ Manufacturing Process ☐ ☐ ☐ Equip/Tooling ☐ ☐ ☐ Handling/Preservation ☐ ☐ ☐ Material ☐ ☐ ☐ Product Improvement ☐ ☐ ☐ Process Improvement ☐ ☐ ☐ Human Factors ☐ ☐ ☐		FAULT CATEGORY Pressure/Forced ☐ ☐ ☐ Bending ☐ ☐ ☐ Crushing ☐ ☐ ☐ Cracks ☐ ☐ ☐ Crimp/Kink/Ripple/Wave/Twist ☐ ☐ ☐ Marks/Chatter ☐ ☐ ☐ Mislabeled ☐ ☐ ☐ Other/Details: _____		Positioned Wrong ☐ ☐ ☐ Outside Tolerance ☐ ☐ ☐ Drawing ☐ ☐ ☐ Finish ☐ ☐ ☐ Part Lost/Missing ☐ ☐ ☐ Misread ☐ ☐ ☐			
		Power Loss/Surge ☐ ☐ ☐ Folio/Program ☐ ☐ ☐ Grain Direction ☐ ☐ ☐ Weld ☐ ☐ ☐ Wrong Stock Pulled ☐ ☐ ☐ Out of Sequence ☐ ☐ ☐ Off-set/Set-up ☐ ☐ ☐		Contamination ☐ ☐ ☐ Misaligned/off center ☐ ☐ ☐ BOM/Route ☐ ☐ ☐ Broken/Damage/Defect ☐ ☐ ☐ Incomplete/Unclear Instructions ☐ ☐ ☐ Drill Holes ☐ ☐ ☐ Fit/Function ☐ ☐ ☐			
		QC / QA Coordinator		Lead hand / Supervisor			